



SPACESHIPS

AND

ROCKETS

Discover
missions to
space!

Packed with FACTS you need to READ!

Deborah Lock



Spaceships and Rockets

By Deborah Lock





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Parts of a Rocket

Rockets are made up of many parts, or stages.

The **booster** rockets give extra power for launch.

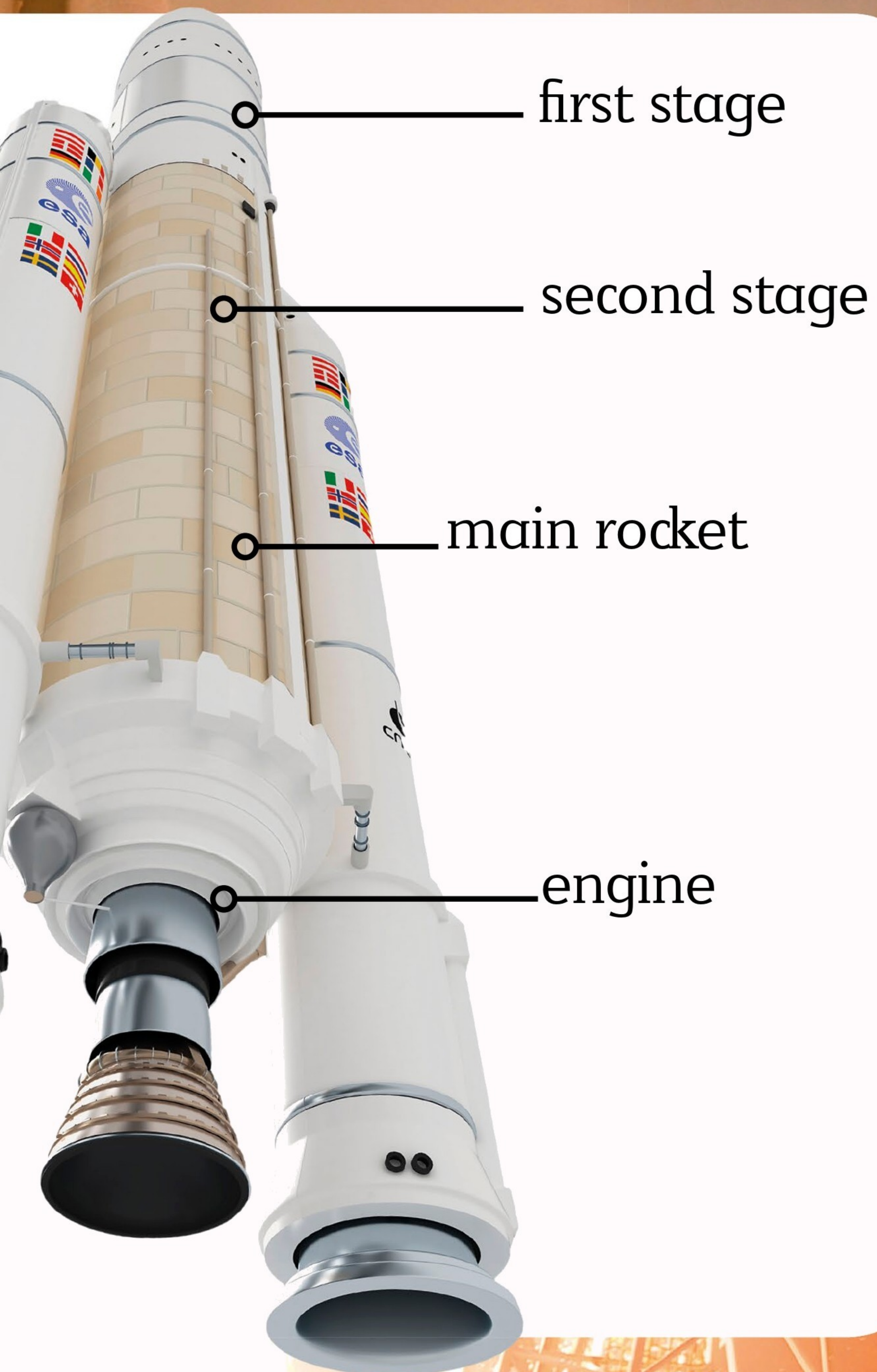
Size guide



booster
rocket

engine





Chapter 1

The Launch



5

The rocket points to the sky. It is ready to launch.

4

The engines spark.
Flames and smoke
billow out.

3

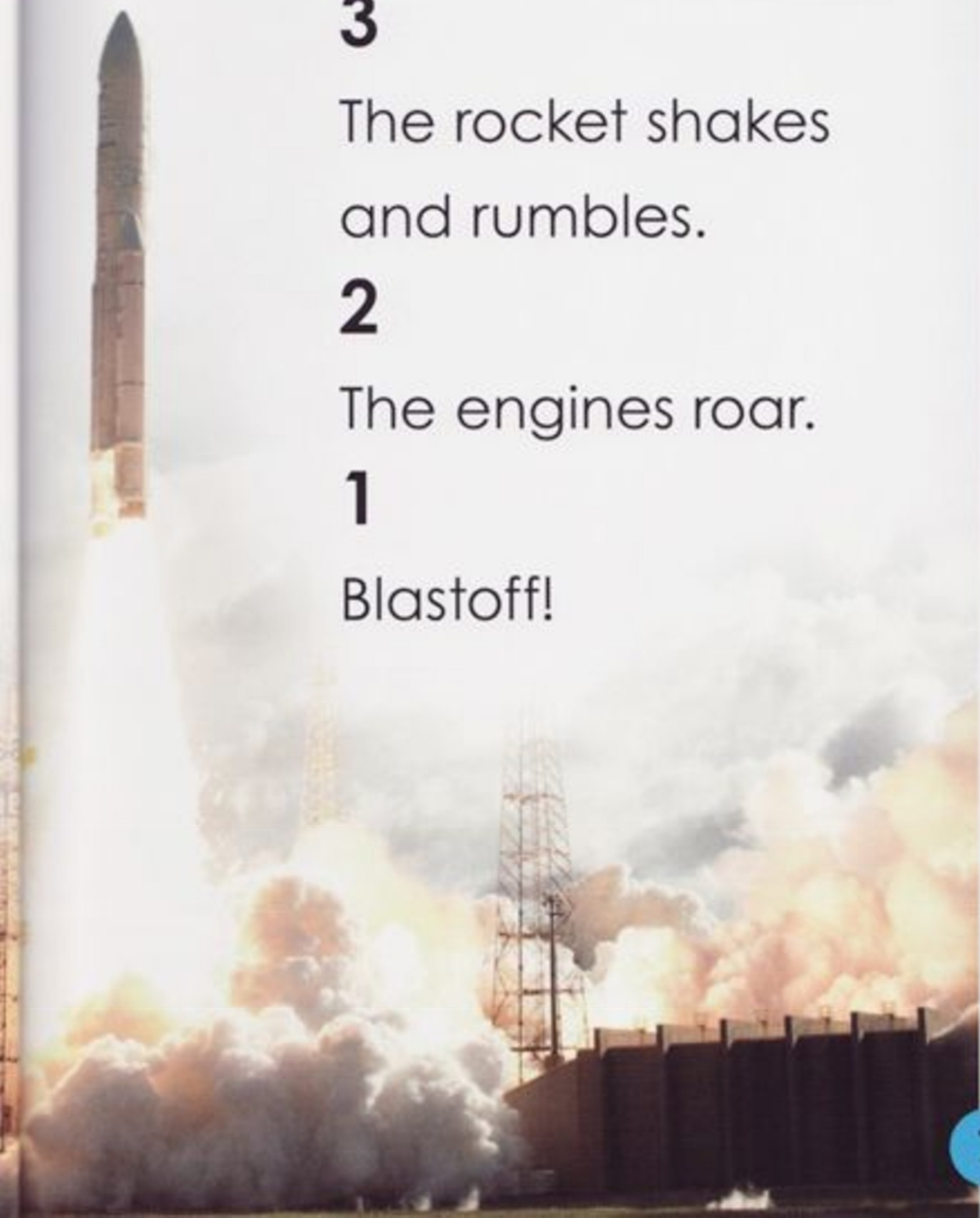
The rocket shakes
and rumbles.

2

The engines roar.

1

Blastoff!



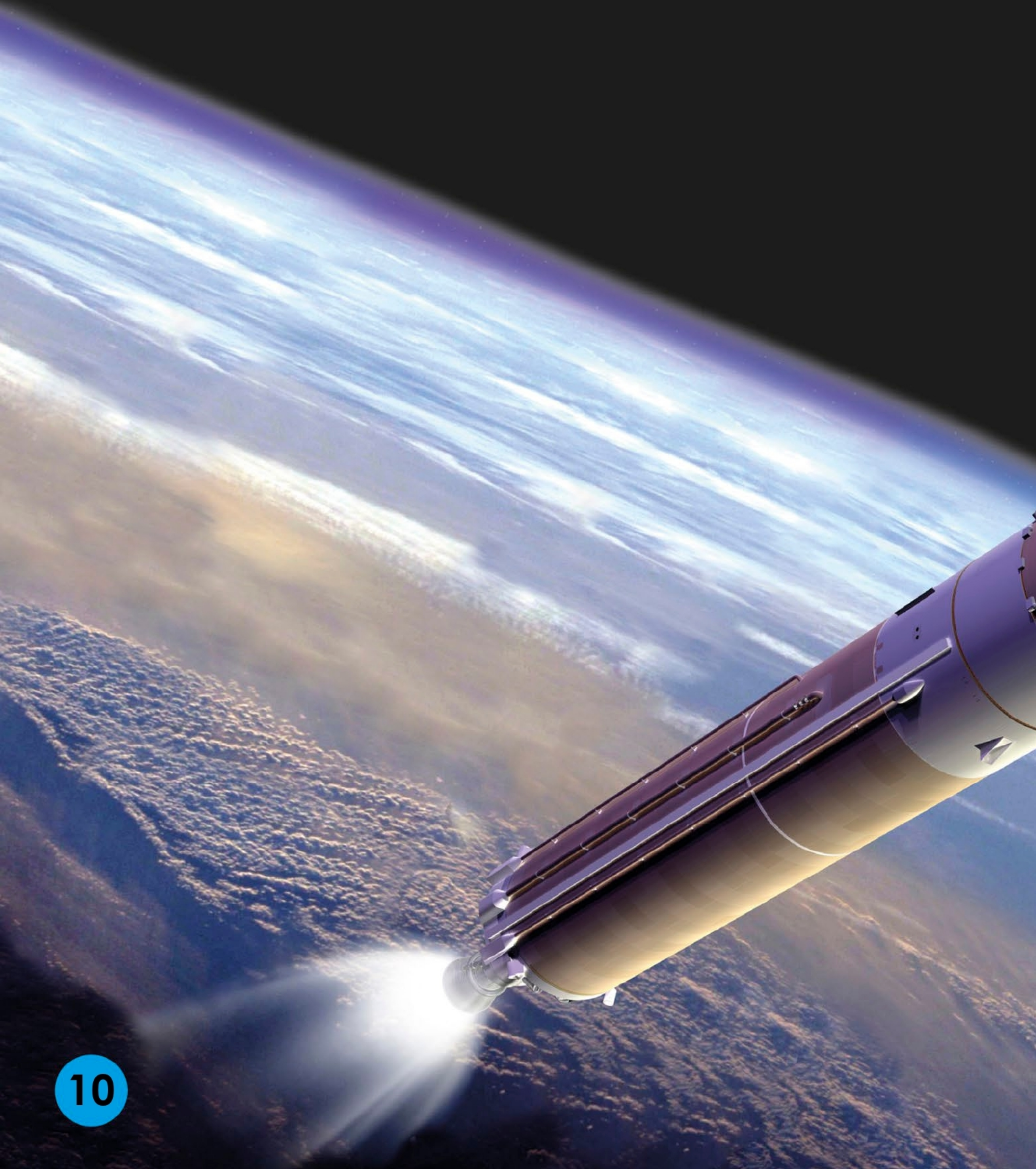
Up, up! The rocket
zooms into the sky.



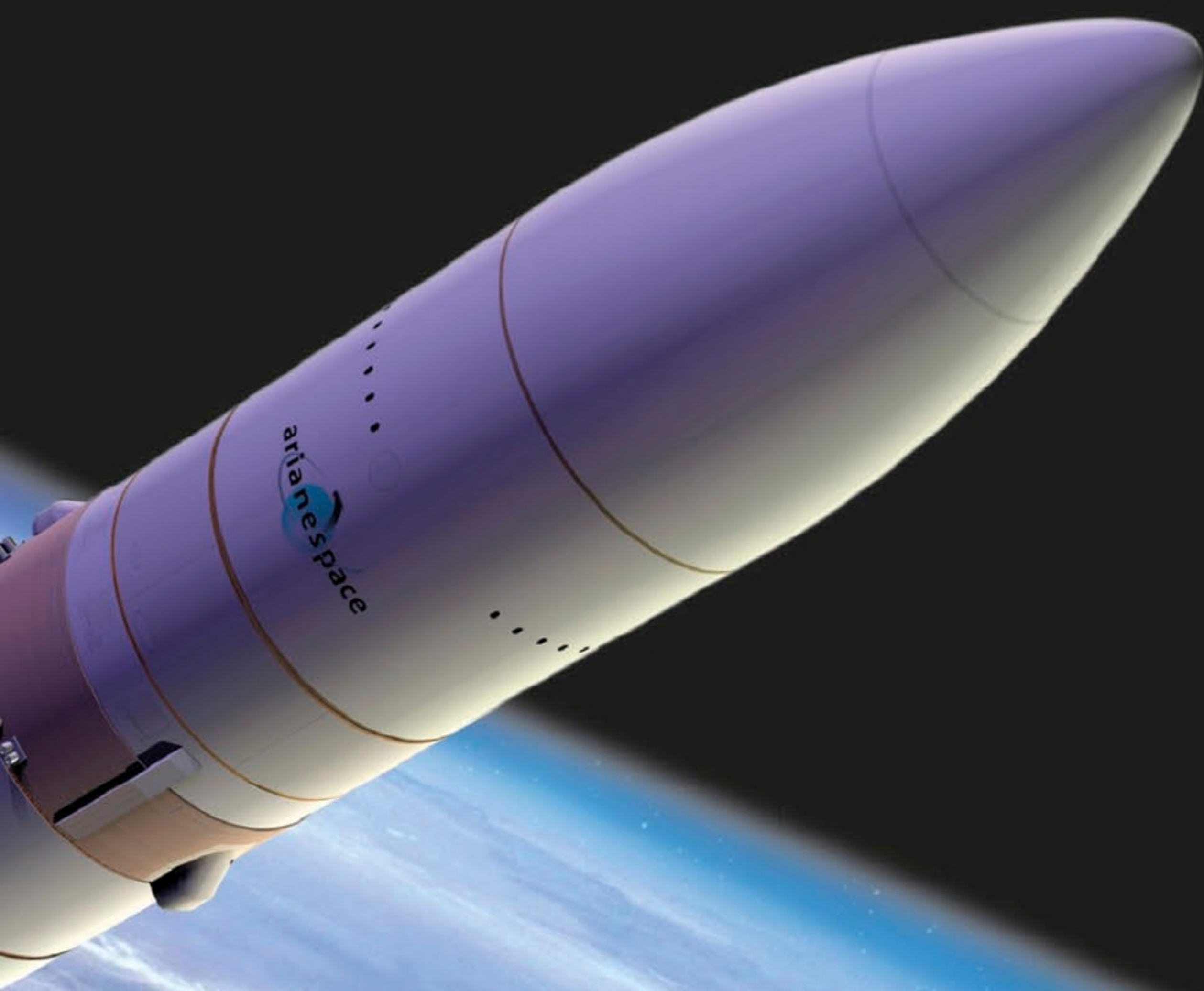
The engines power the rocket higher and higher. The rocket looks like a tiny speck in the sky. The boosters drop away.



The rocket fires its smaller engine. It zooms upward, faster and faster.



It passes through the thin layer of gases around Earth. The rocket breaks through into the darkness of space.



Each rocket that blasts off
has a job to do—a mission.





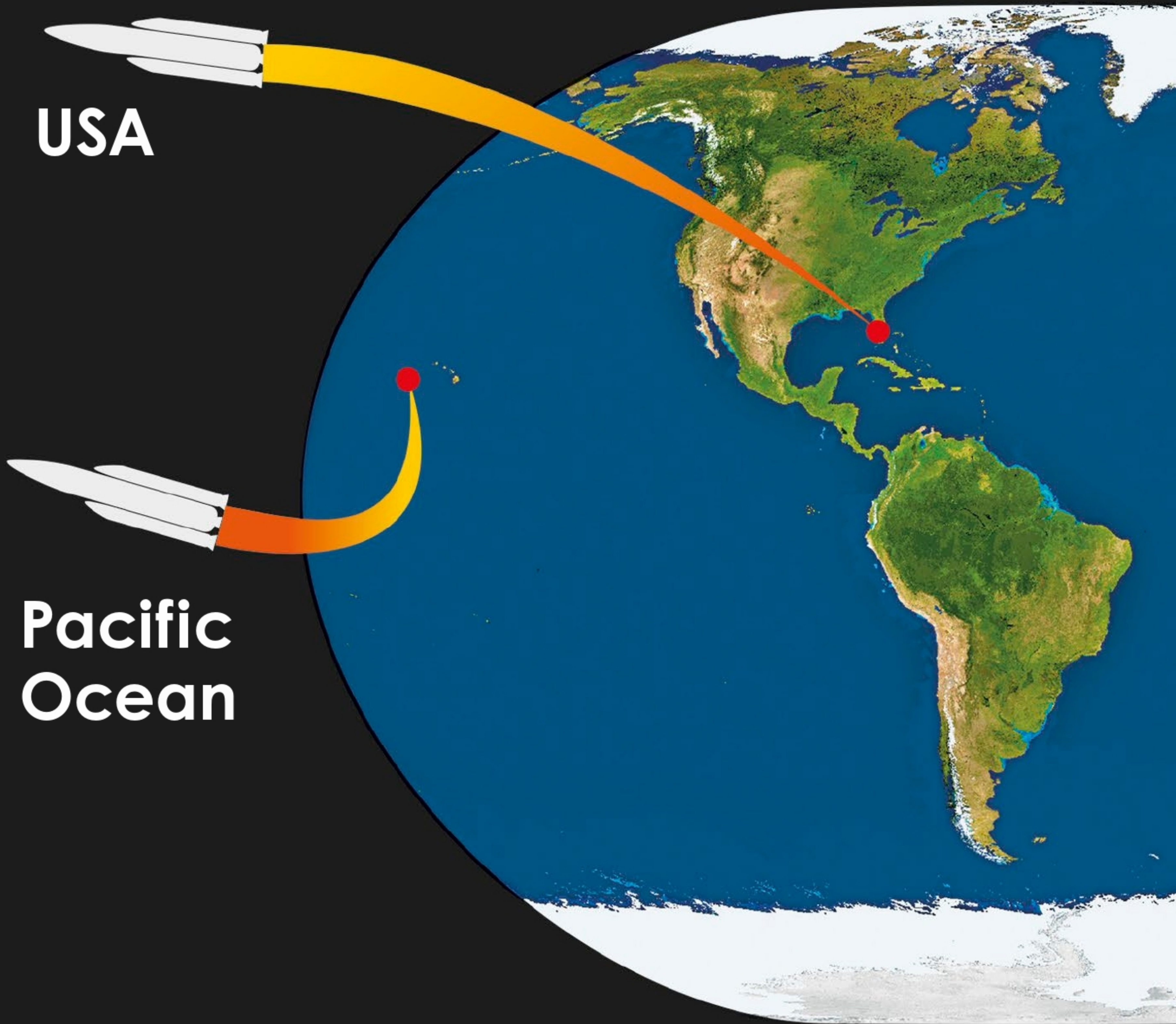
These missions can last a few days or a few weeks. Some missions can last for years and years.



Launch Sites

Countries around the world launch rockets. Here are some of the launch sites.

USA



Pacific
Ocean

Russia

India

China



Chapter 2

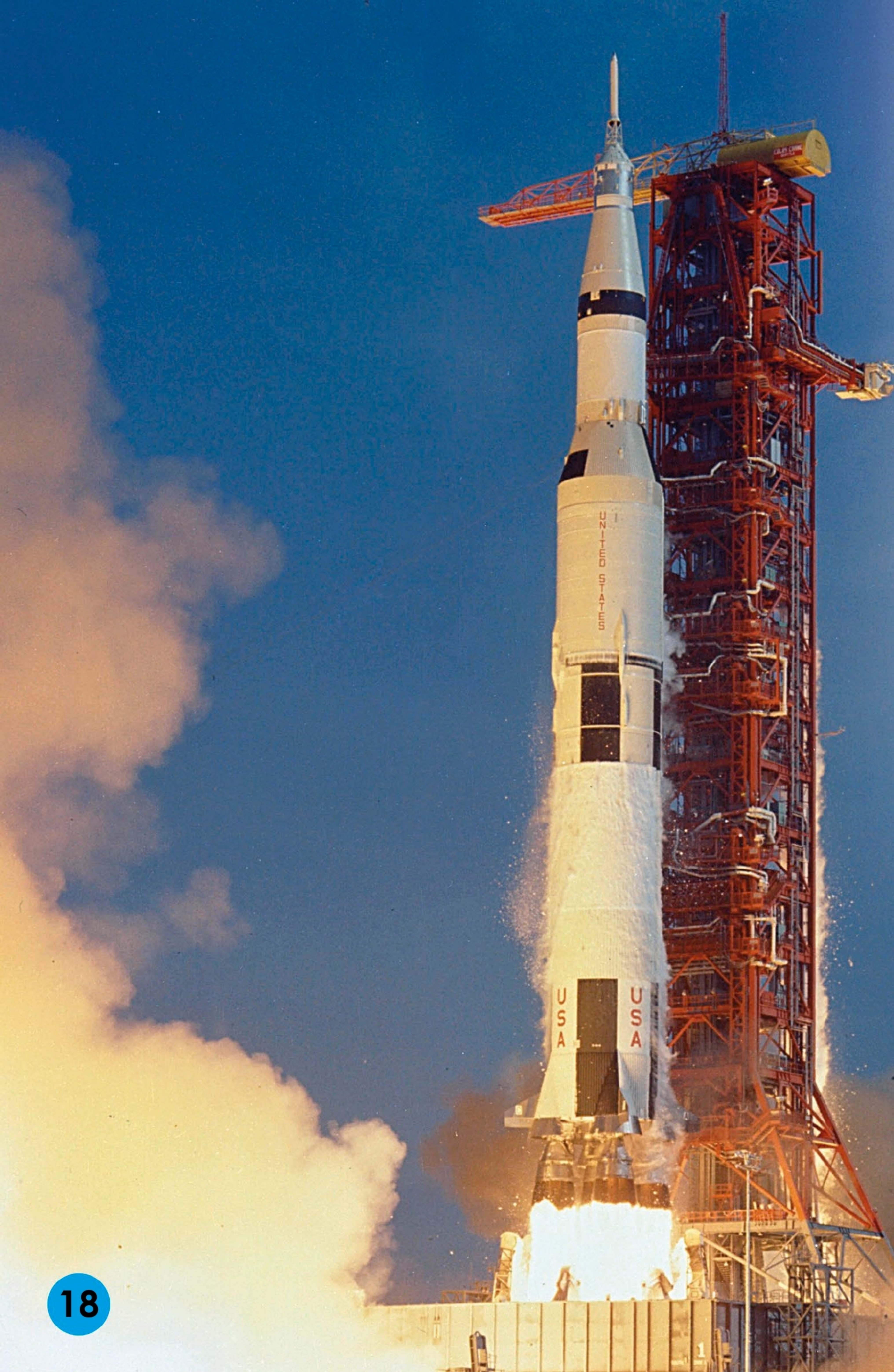
Manned Missions

Some rockets carry
people into space.
This rocket is called
Vostok 1 [VOH-stock].



It took the first person into space in 1961. His name was Yuri Gagarin [YOUR-ee ga-GAR-een]. He was Russian.

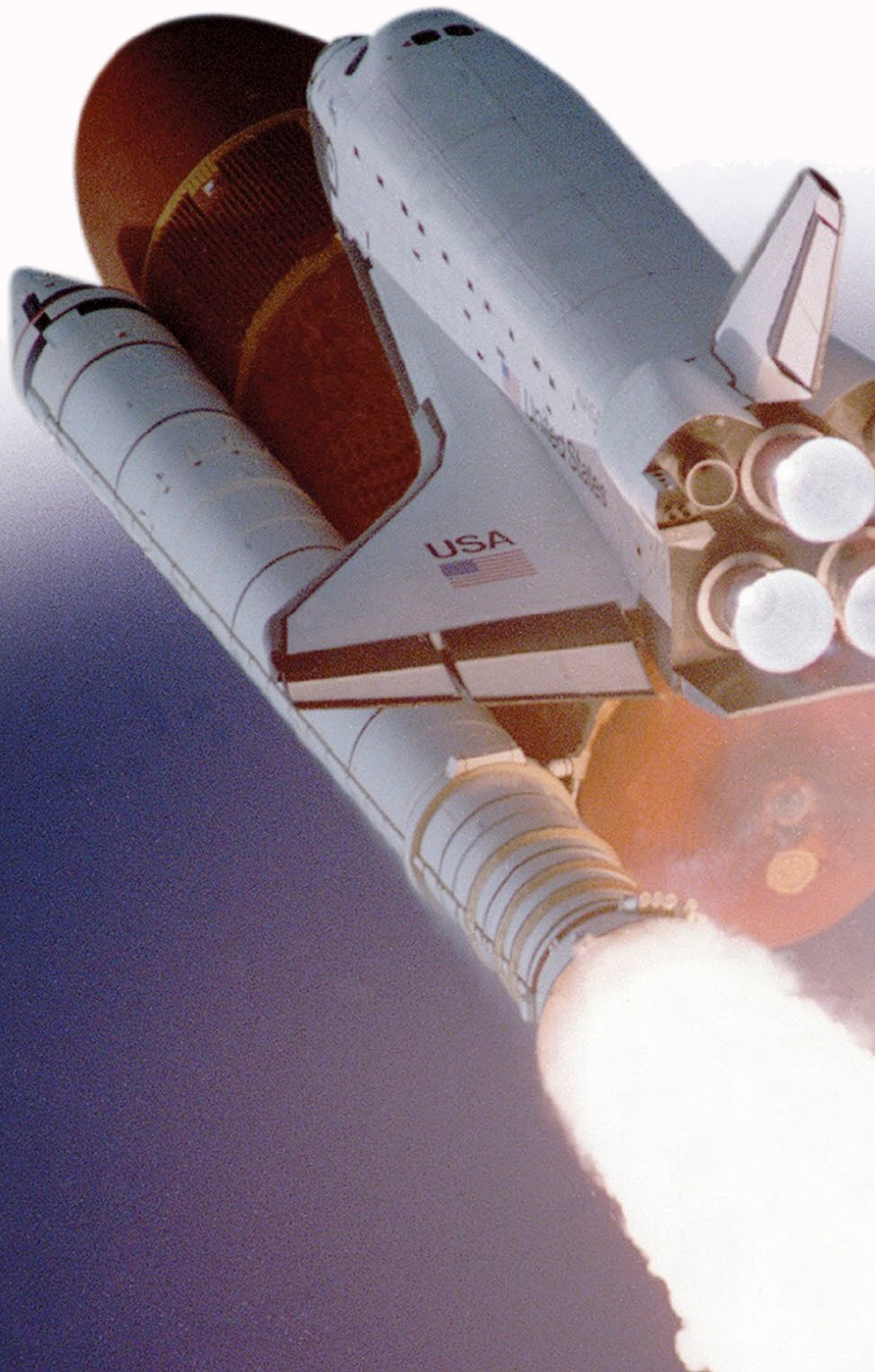




The *Saturn V* (5) rocket took people to the Moon. It was the largest rocket ever built. The **astronauts** sat in a small **capsule** called *Apollo 11*. This capsule was on the top of the rocket.



This is the space shuttle.
It took off on a rocket and
landed as a plane. It was
used to take astronauts
into space many times.





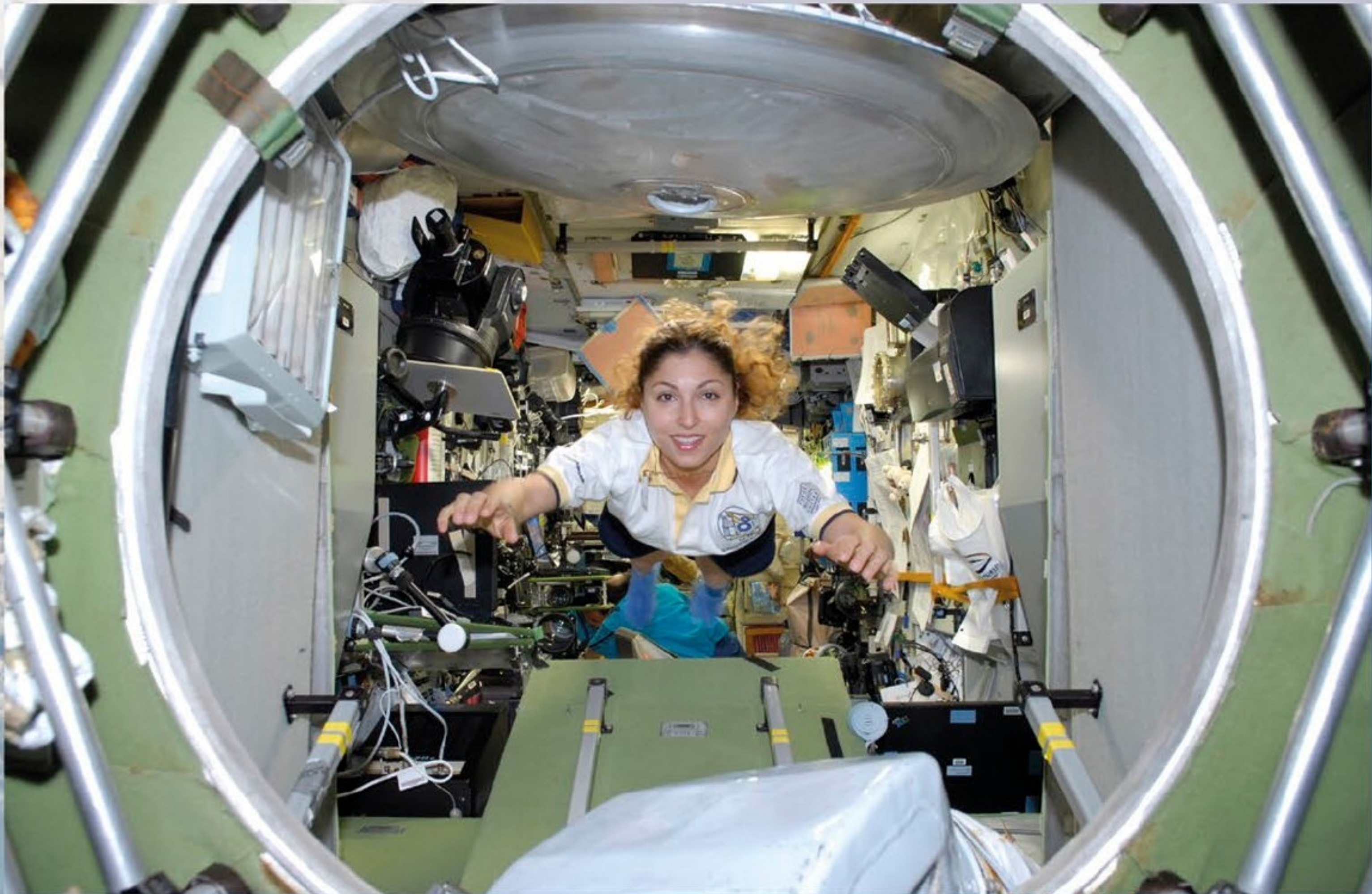
These astronauts visited
the **space station** and
did space walks.



Some rockets now take
tourists for a trip into space.
This is the Russian rocket
Soyuz [SU-yoos].



At the top is a **spacecraft** that takes people to the International Space Station. They stay for a week.





Visit the International Space Station

**1-week trip
Price:
\$50 million**



 **work in the lab**

☀ eat space food



☀ keep fit



☀ strap in to sleep

Chapter 3

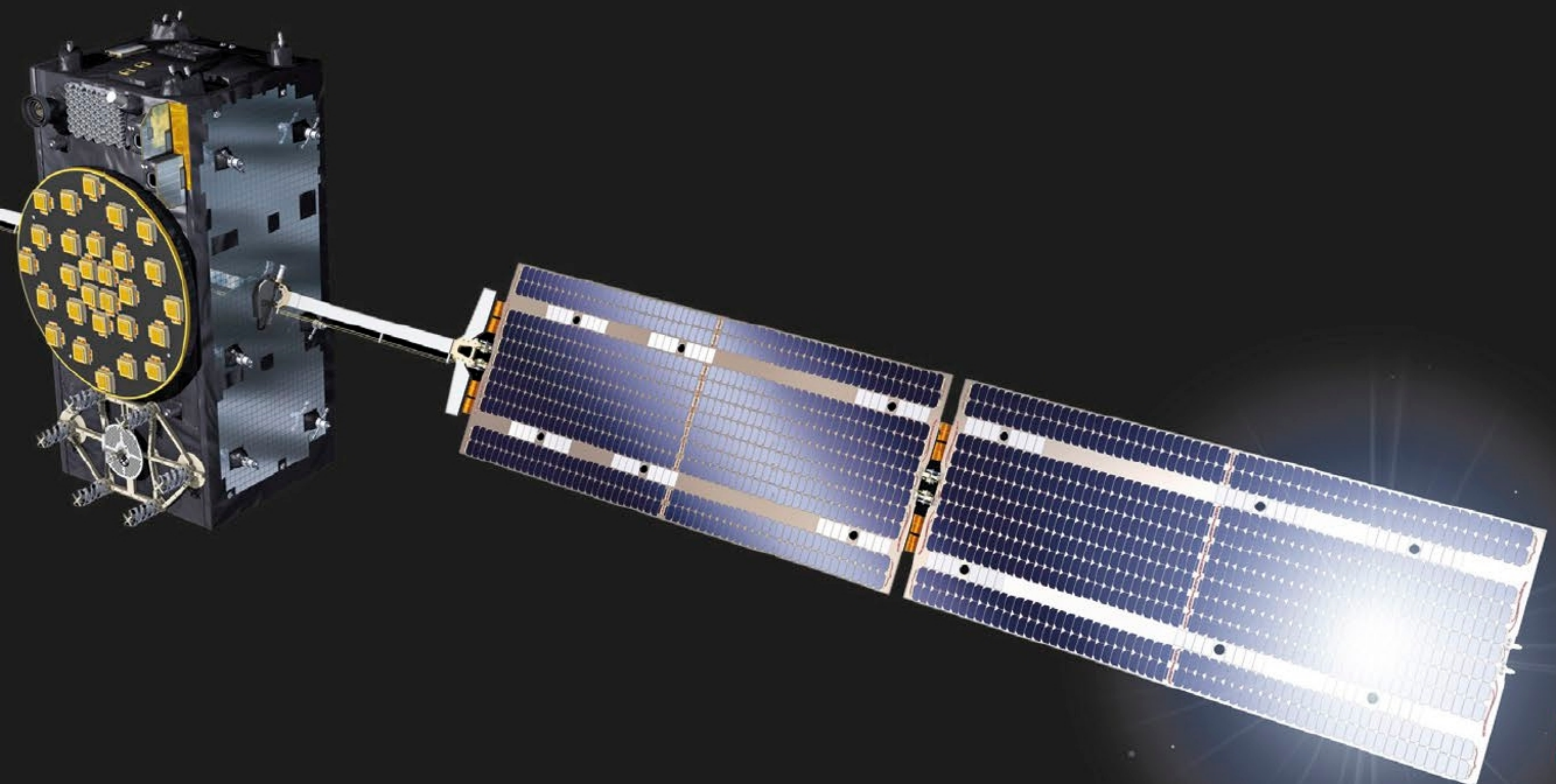
Unmanned Missions

Some rockets carry satellites and probes into space. Satellites are machines. They travel around, or **orbit**, Earth.

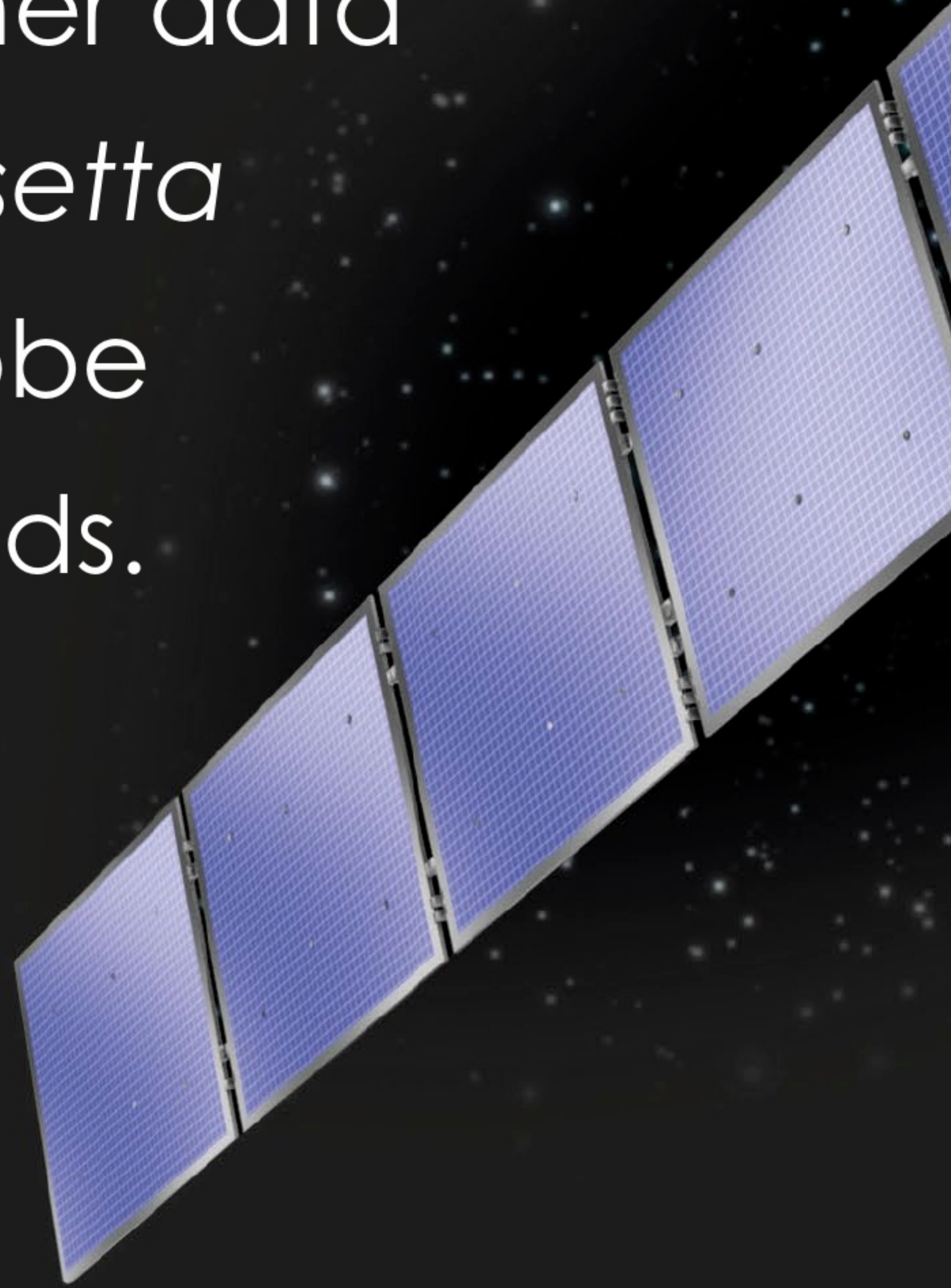
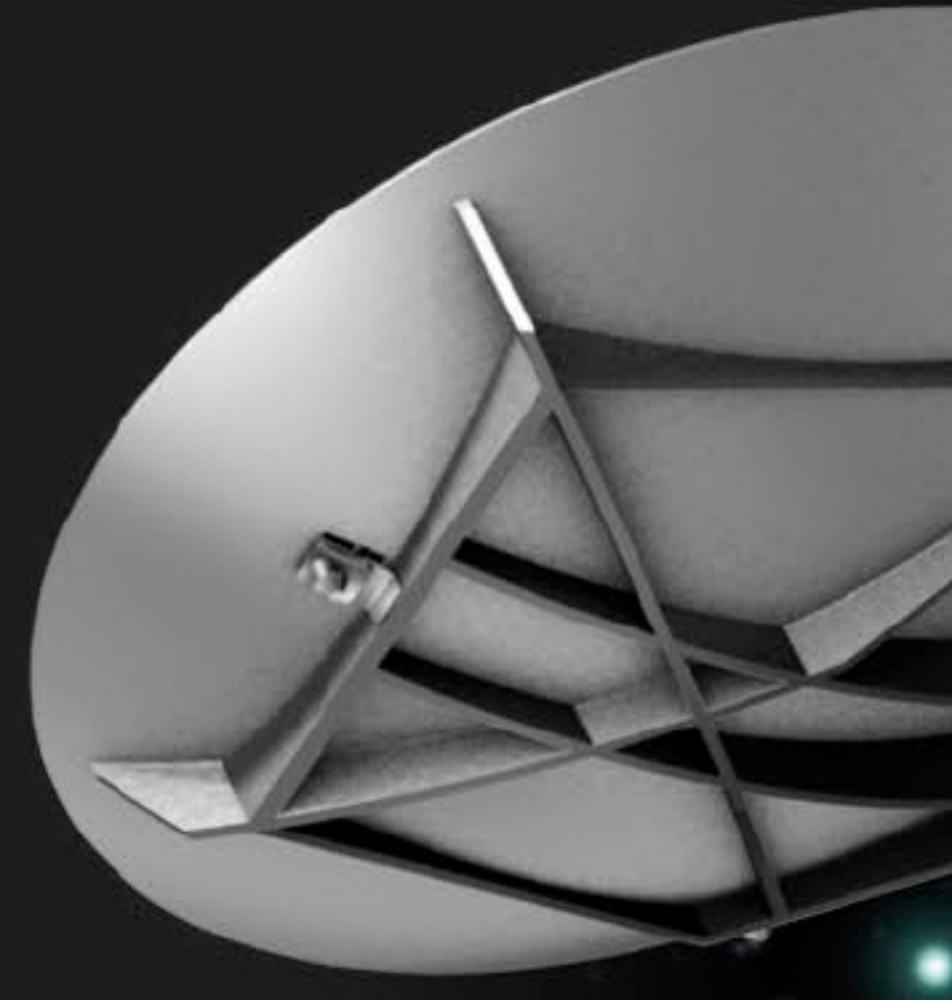


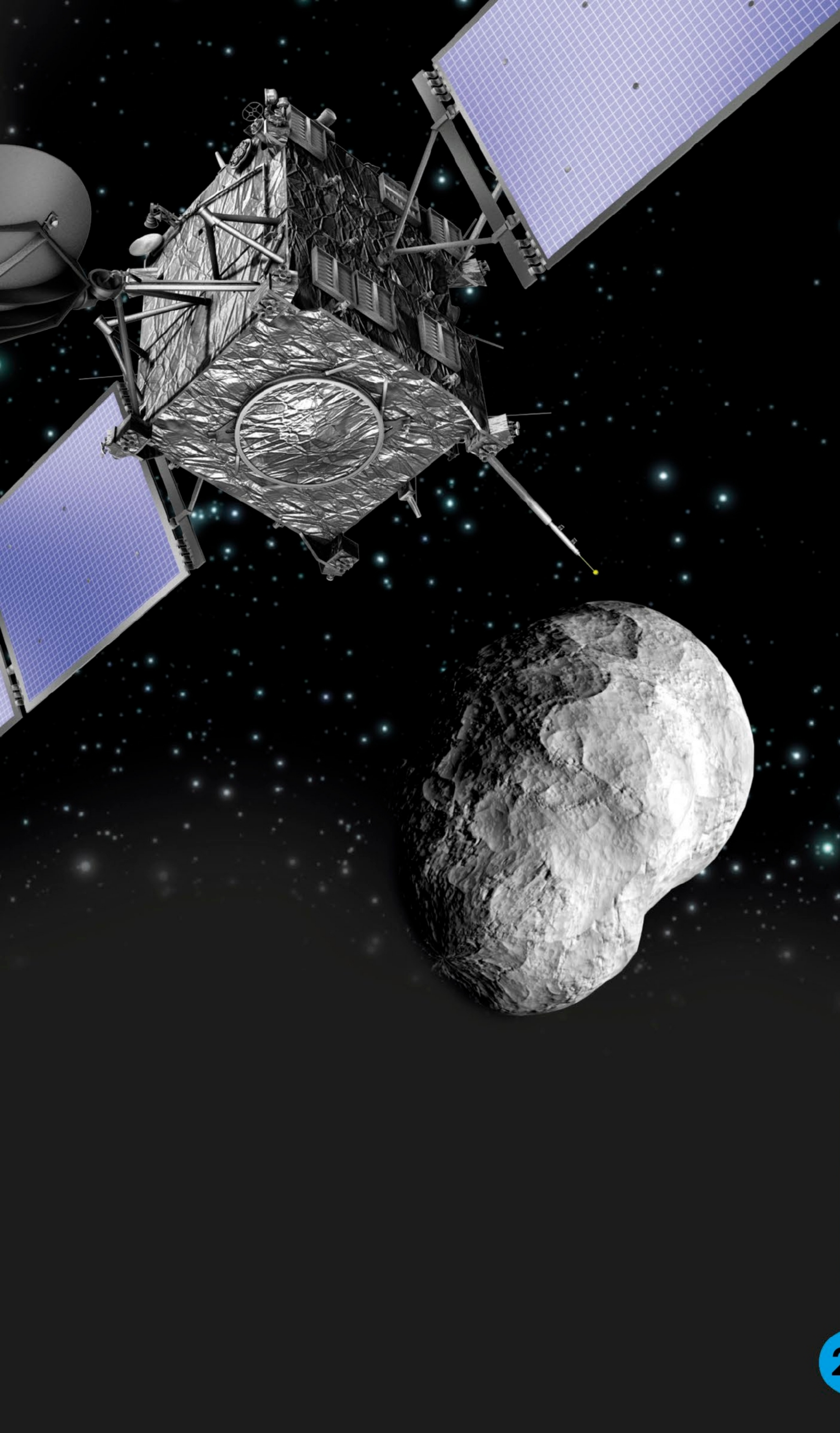
Satellites send back pictures and messages to Earth.

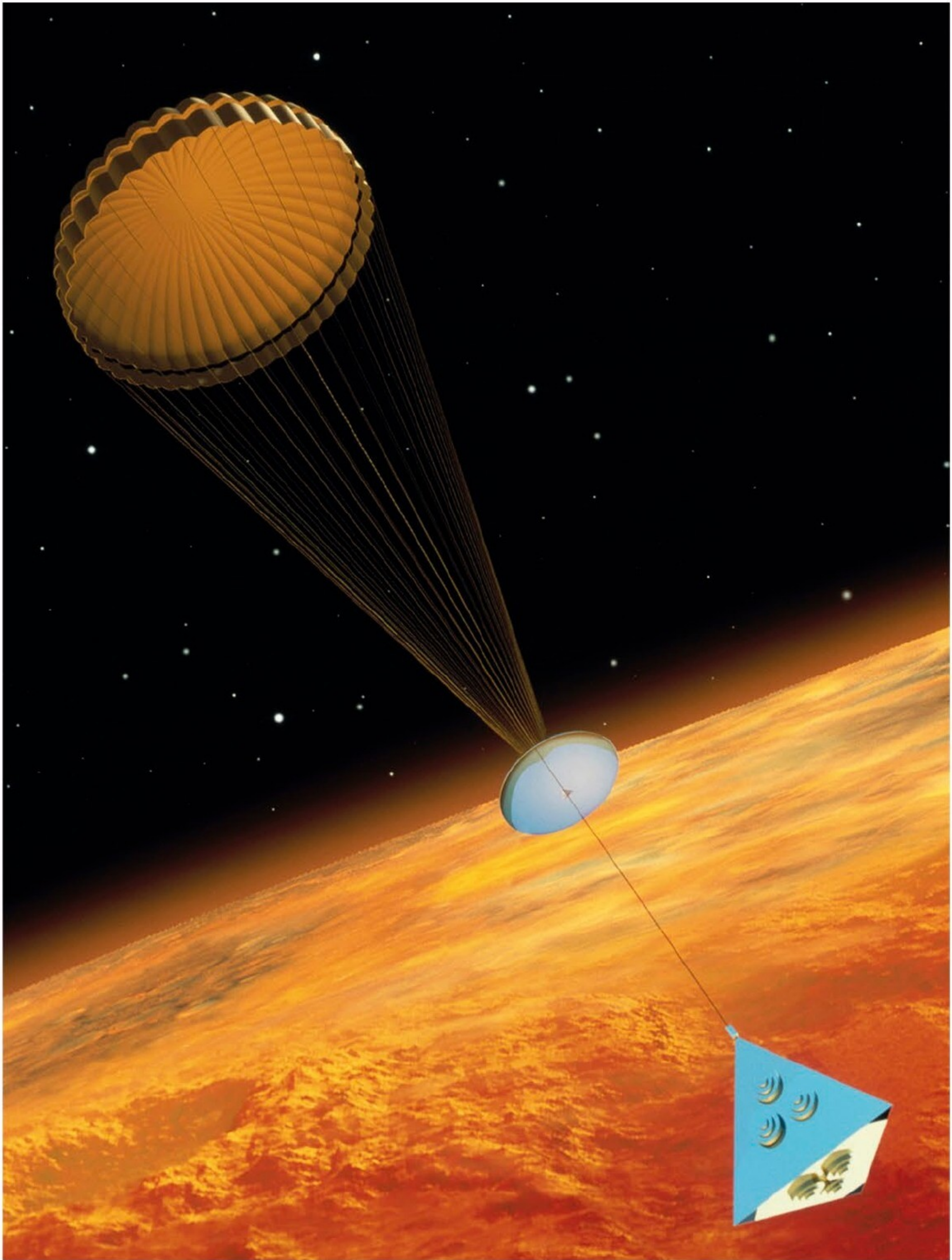
The *Ariane 5* [ah-ree-AH-ne] rocket can carry two heavy satellites.



Probes are small, unmanned spacecraft. These probes fly to planets and explore space. They send back pictures and other data to Earth. The *Rosetta* [roh-SET-tah] probe flew past asteroids.







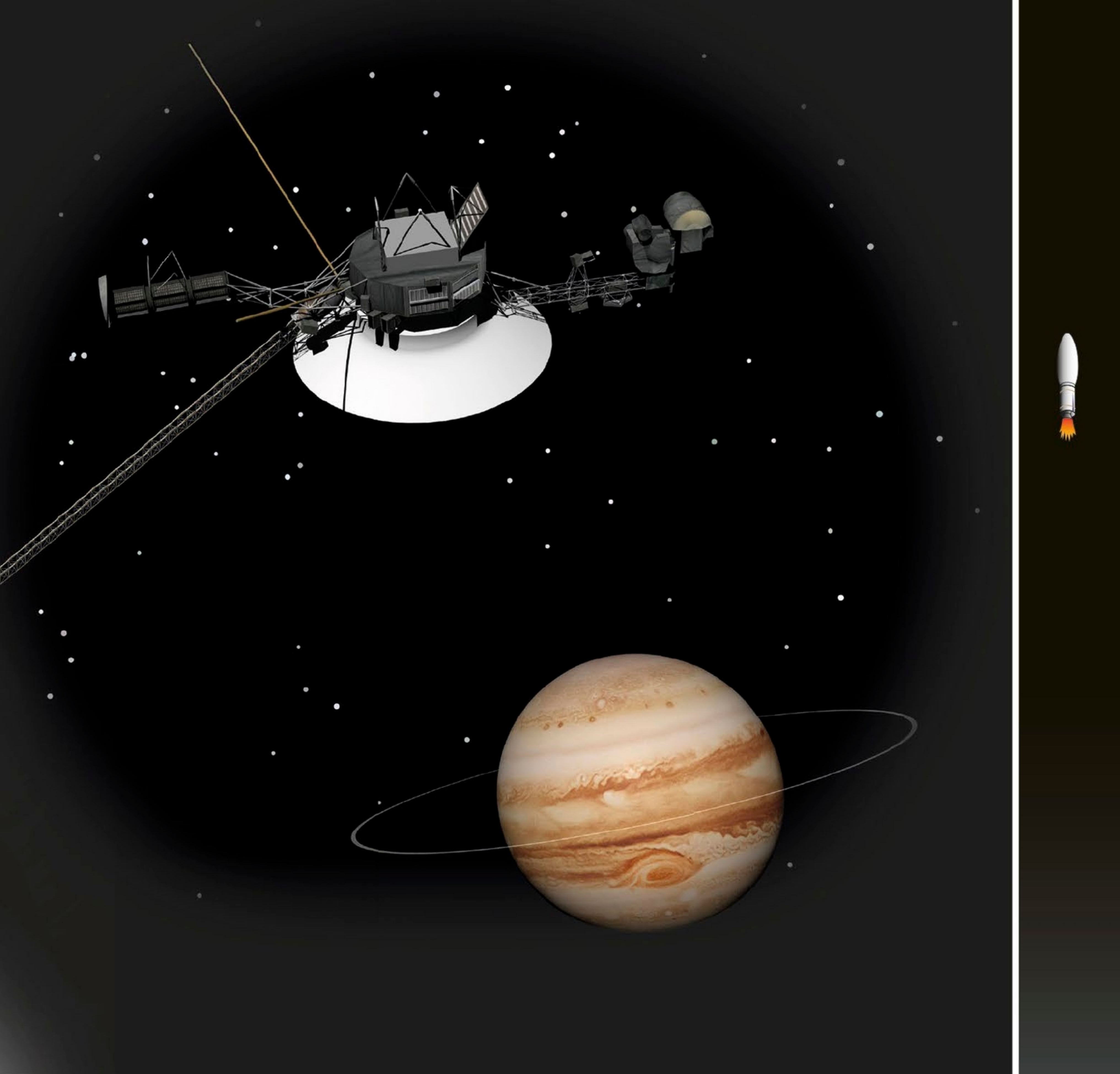
The *Pathfinder* probe
landed on Mars in 1997.
It needed a very large
parachute to slow down.

It landed a small robotic vehicle called a **rover**. This was the first robot to do tests on the planet.



*A Titan-Centaur
[TI-tan-SEN-tor] rocket carried
Voyager 1 and 2 into space.*

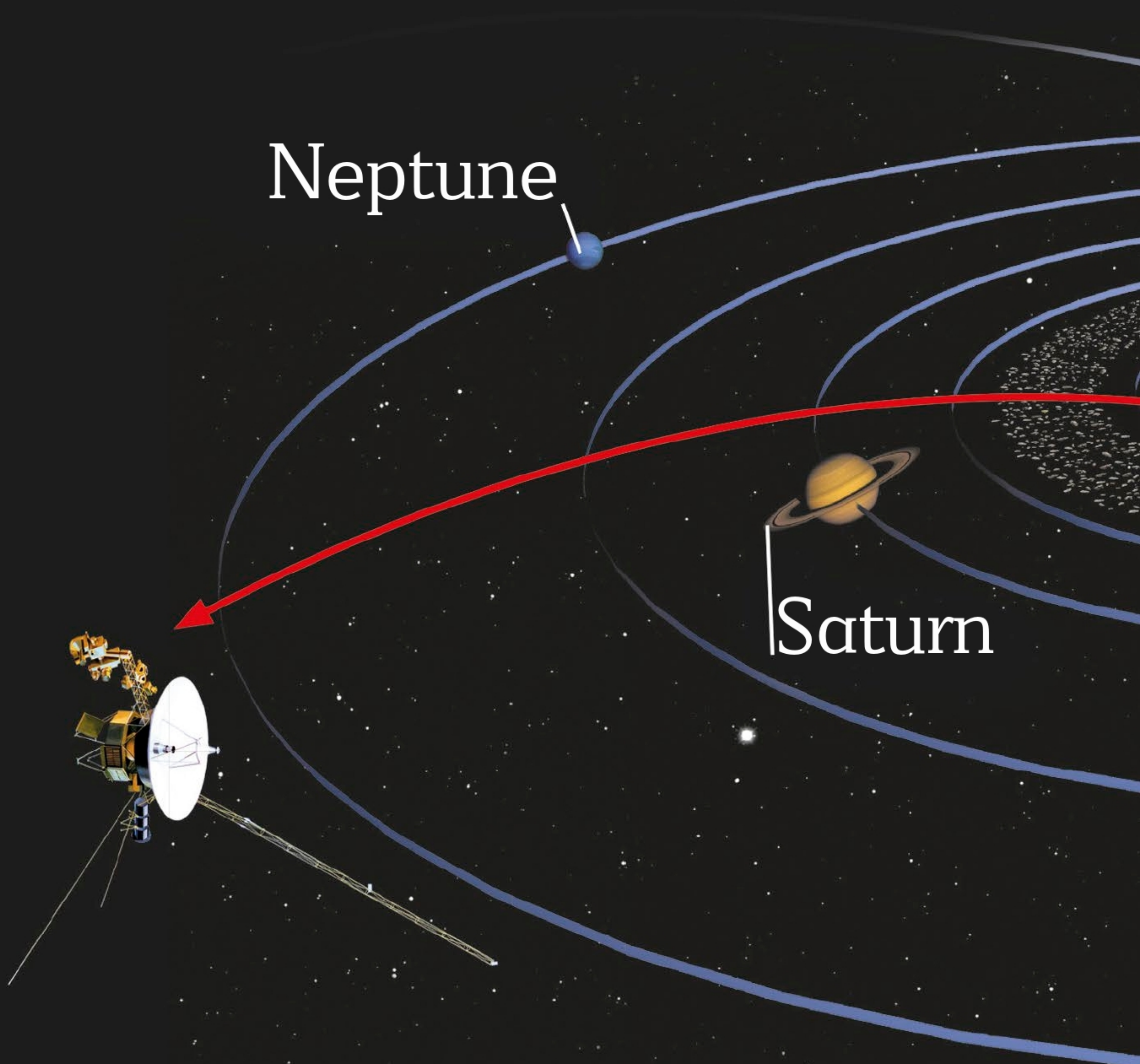


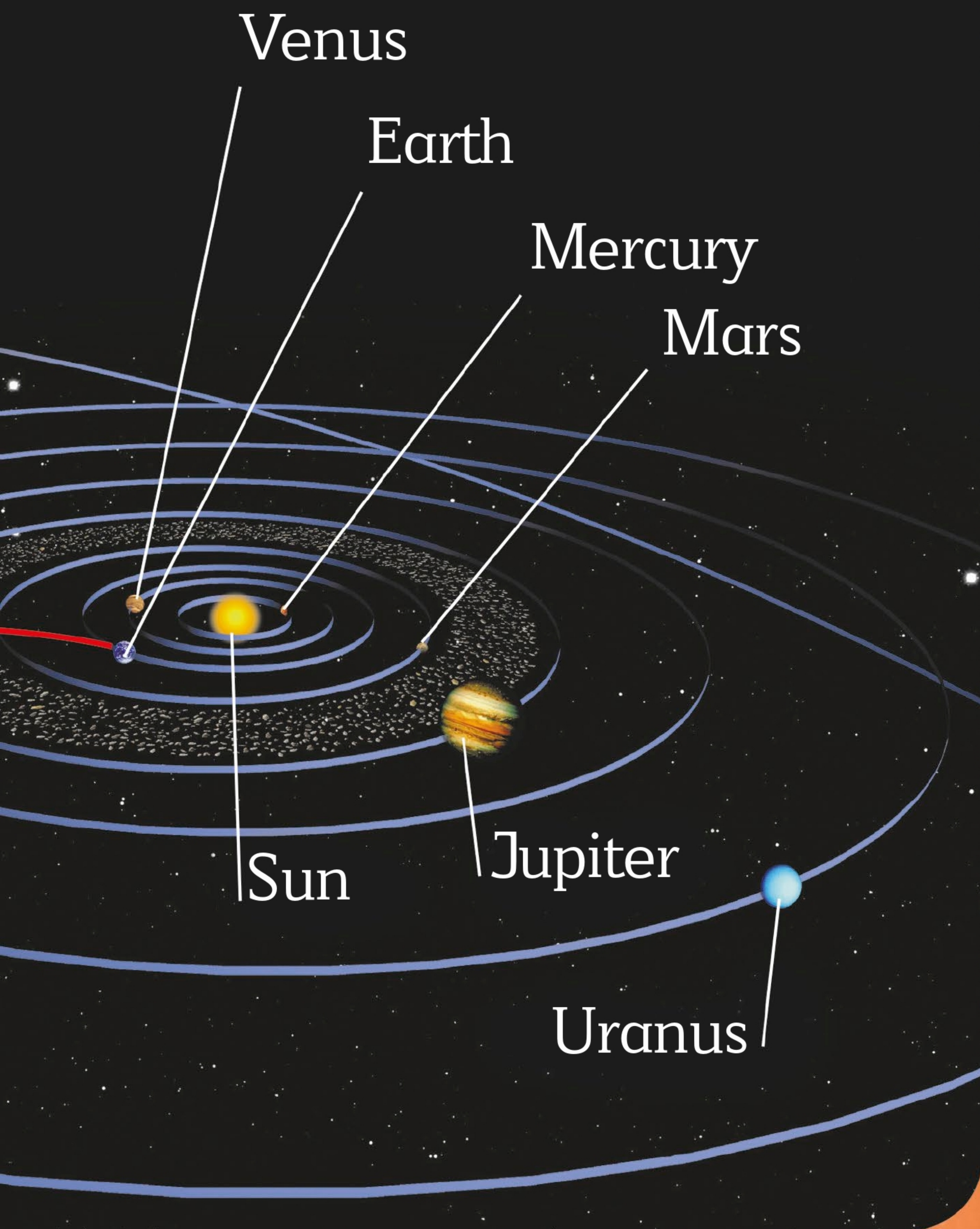


The *Voyager* probes have been flying for more than 35 years. *Voyager 2* has flown past the planets Jupiter, Saturn, Uranus, and Neptune.

Voyager

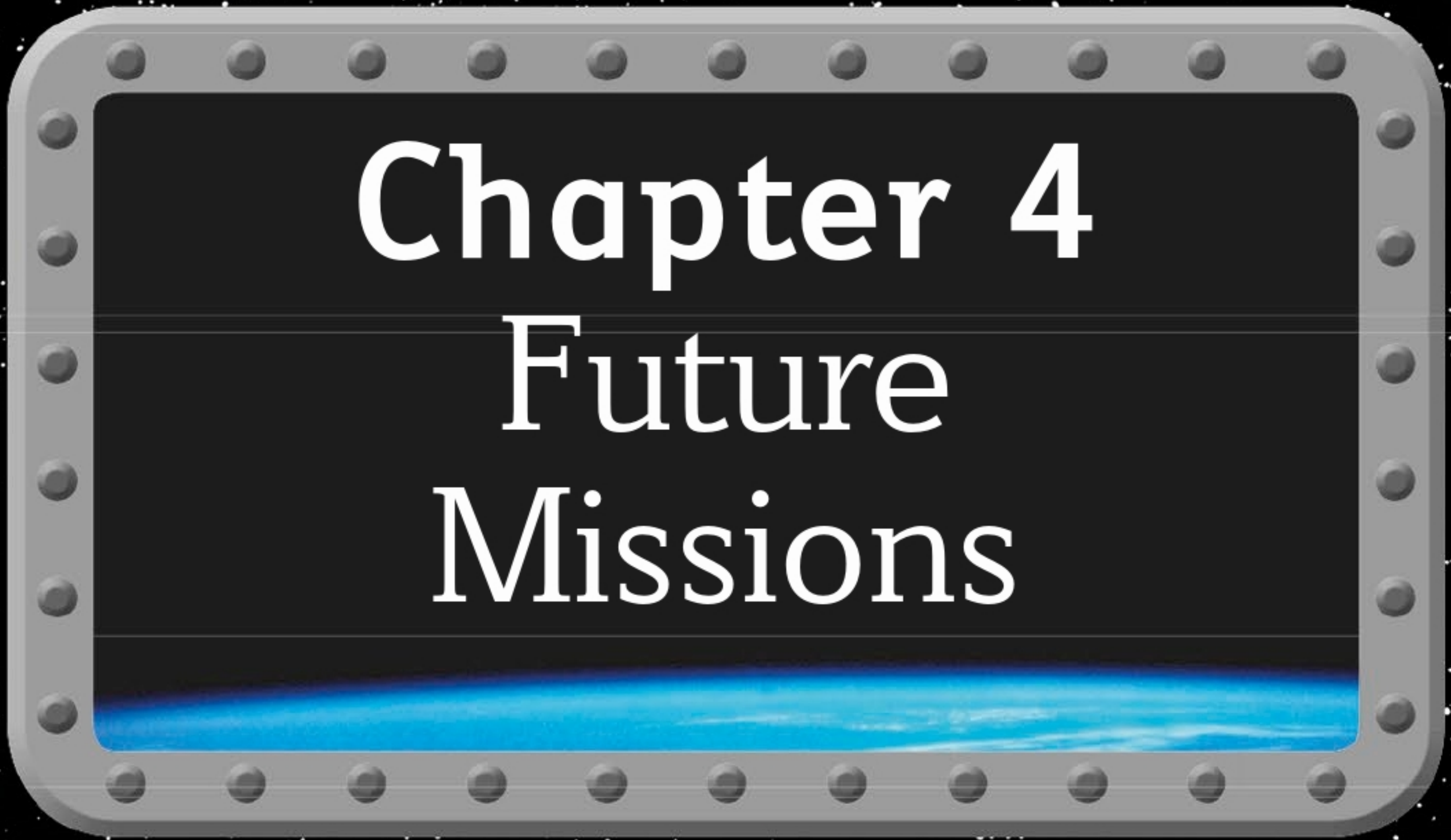
The *Voyager* probes are the farthest spacecraft from Earth.



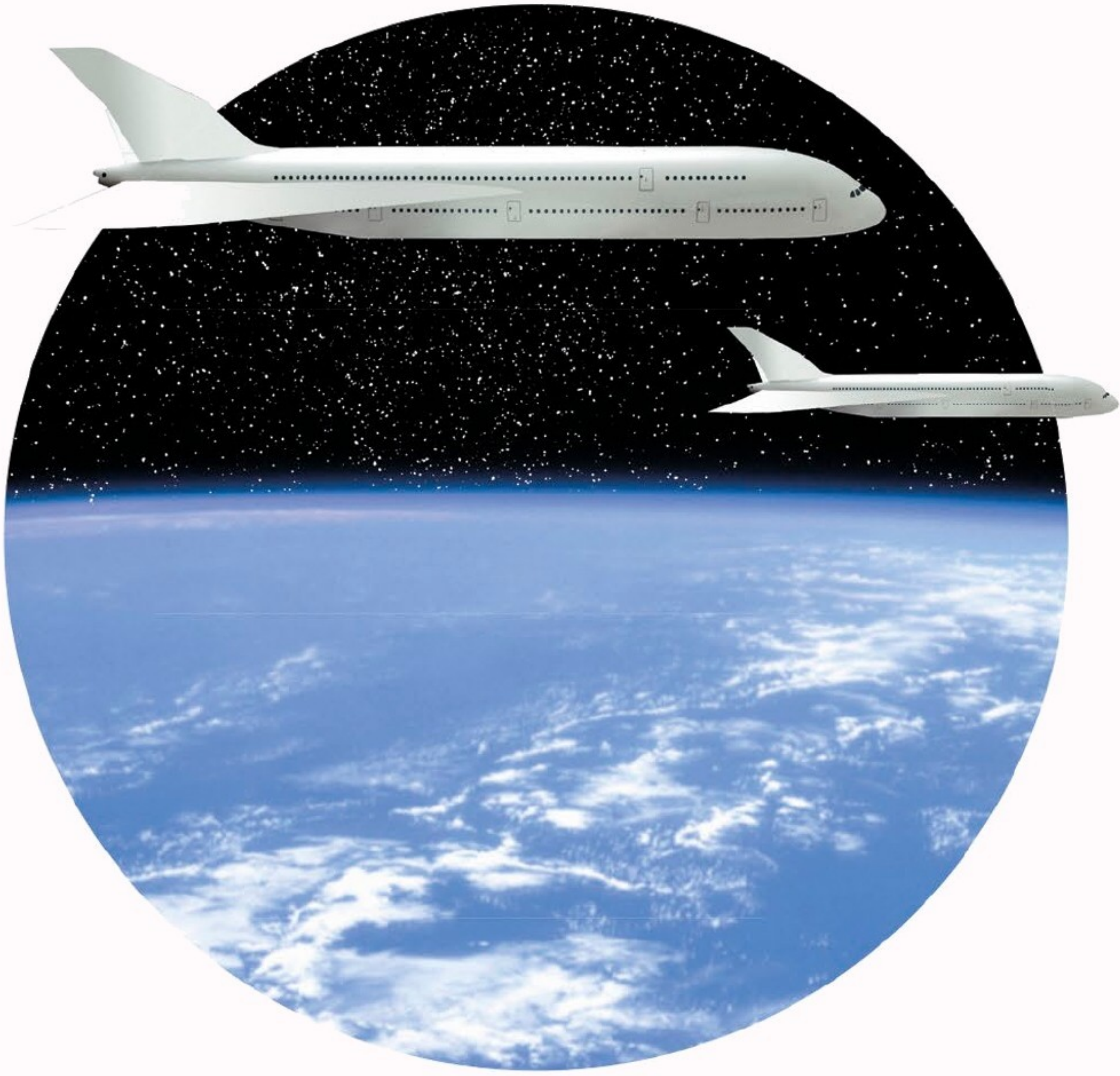


Chapter 4

Future Missions



Would you like to go
on a trip into space?



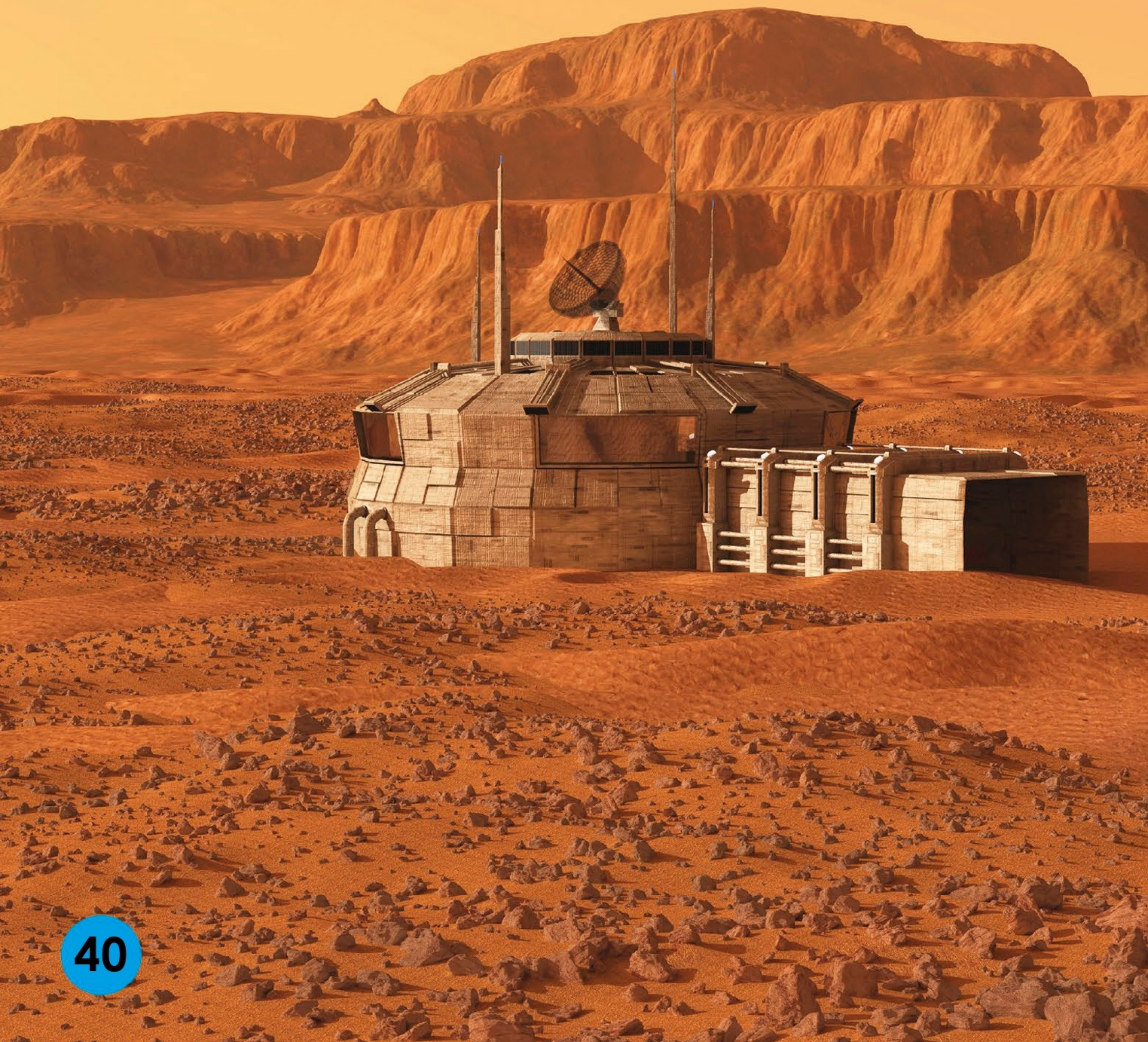
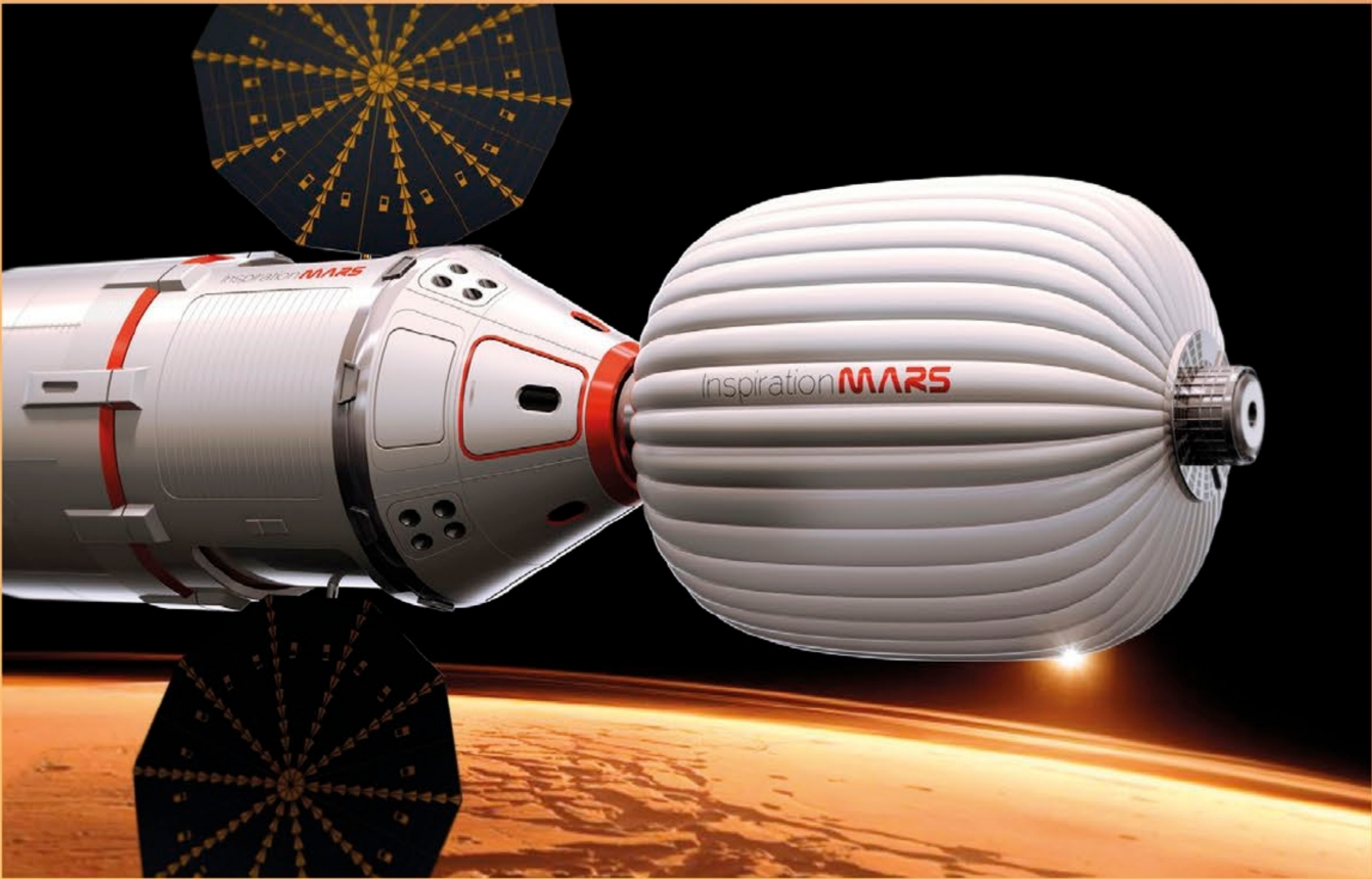
Spacecraft could soon take **passengers** on trips into sub-orbit. The passengers would feel like they are floating for a few minutes. Then the spacecraft would return to Earth.

There are many ideas
for a future in space.
Spaceplanes will take off
from runways. Spacecraft
will take passengers on
trips to space hotels.



Spaceships will take
astronauts to Mars
and beyond.

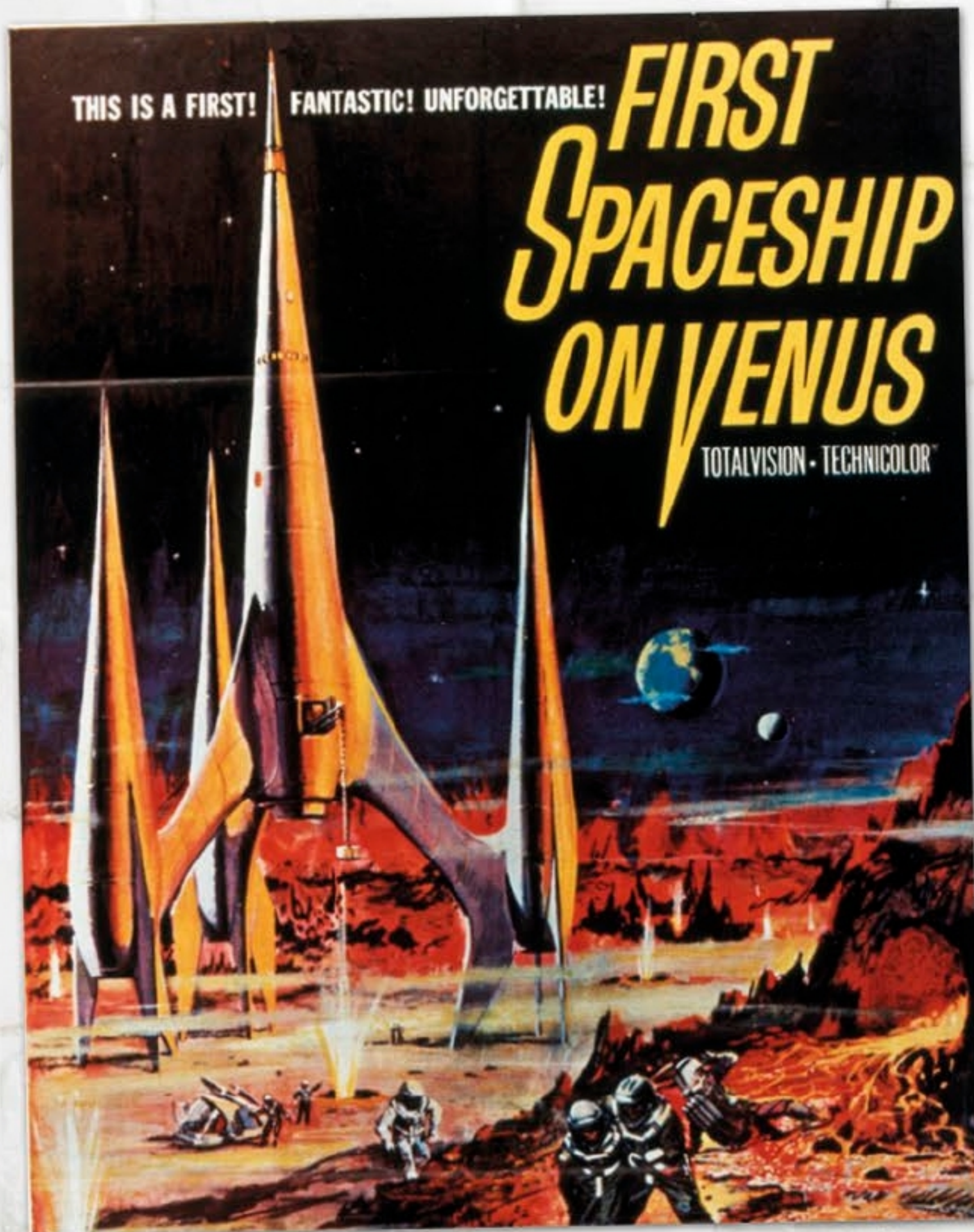




Could this be the future
for getting to Mars and
living there? Would you like
to be a space traveler?



Spaceship Gallery



These spaceships are not real.
They appear in movies.

Rockets Quiz

1. In what year did the first person go into space?
2. Which is the largest rocket ever built?
3. How long have the *Voyager* probes been flying?
4. How many satellites can *Ariane 5* carry?
5. Where did the *Pathfinder* probe land?

Answers on page 45.

Glossary

astronaut person who has been trained to travel inside a spacecraft

booster part of a rocket that gives extra speed and power at lift off

capsule part of a spacecraft that people travel in, and often splits away from the rocket

lab (laboratory) place where science tests are carried out

orbit path an object makes around another object

passenger person who travels, but is not the driver
rover robotic vehicle that explores the surface of planets
spacecraft vehicle or probe designed to travel in space
space station space lab that orbits Earth with astronauts living there

Answers to the Rockets Quiz:

1. 1961; 2. *Saturn V*; 3. More than 35 years; 4. Two; 5. Mars.

Guide for Parents

DK Readers is a four-level interactive reading adventure series for children, developing the habit of reading widely for both pleasure and information. These books have an exciting main narrative interspersed with a range of reading genres to suit your child's reading ability. Each book is designed to develop your child's reading skills, fluency, grammar awareness, and comprehension in order to build confidence and engagement when reading.

Ready for a *Beginning to Read* book

YOUR CHILD SHOULD

- be familiar with using beginning letter sounds and context clues to figure out unfamiliar words.
- be aware of the need for a slight pause at commas and a longer one at periods.
- alter his/her expression for questions and exclamations.

A VALUABLE AND SHARED READING EXPERIENCE

For many children, reading requires much effort, but adult participation can make this both fun and easier. So here are a few tips on how to use this book with your child.

TIP 1 Check out the contents together before your child begins:

- read the text about the book on the back cover.
- flip through the book and stop to chat about the contents page together to heighten your child's interest and expectation.
- make use of unfamiliar or difficult words on the page in a brief discussion.
- chat about the nonfiction reading features used in the book, such as headings, captions, recipes, lists, or charts.

TIP 2 Support your child as he/she reads the story pages:

- give the book to your child to read and turn the pages.
- where necessary, encourage your child to break a word into syllables, sound out each one, and then flow the syllables together. Ask him/her to reread the sentence to check the meaning.
- when there's a question mark or an exclamation mark, encourage your child to vary his/her voice as he/she reads the sentence. Demonstrate how to do this if it is helpful.

TIP 3 Chat at the end of each page:

- the factual pages tend to be more difficult than the story pages, and are designed to be shared with your child.
- ask questions about the text and the meaning of the words used. These help to develop comprehension skills and awareness of the language used.

A FEW ADDITIONAL TIPS

- Always encourage your child to try reading difficult words by themselves. Praise any self-corrections, for example, "I like the way you sounded out that word and then changed the way you said it, to make sense."
- Try to read together everyday. Reading little and often is best. These books are divided into manageable chapters for one reading session. However, after 10 minutes, only keep going if your child wants to read on.
- Read other books of different types to your child just for enjoyment and information.

Series consultant, **Dr. Linda Gambrell**, Distinguished Professor of Education at Clemson University, has served as President of the National Reading Conference, the College Reading Association, and the International Reading Association.

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Read about rockets and spacecraft that have zoomed into space!

5, 4, 3, 2, 1. Blast off! Discover the manned and unmanned missions, and find out about space travel planned for the future.

LEARN TO READ, THEN READ TO LEARN!

Engaging stories and fun, interactive pages build reading skills • Developed in consultation with leading literacy experts • Helps build a lifelong love of reading

A level for every reader



**LEARNING
TO READ**



**BEGINNING
TO READ**

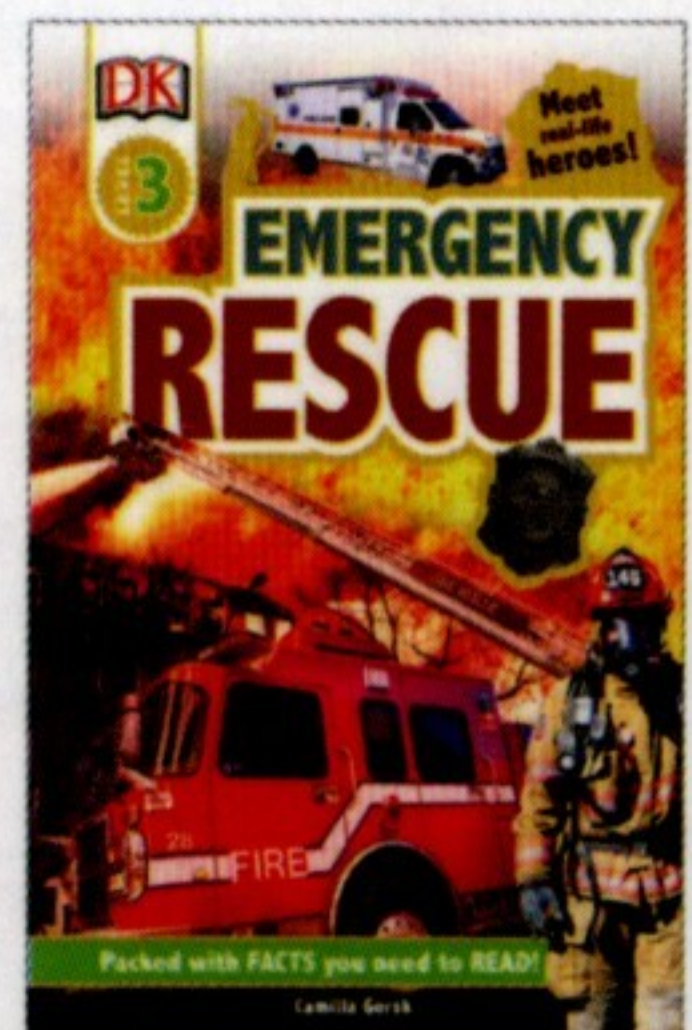
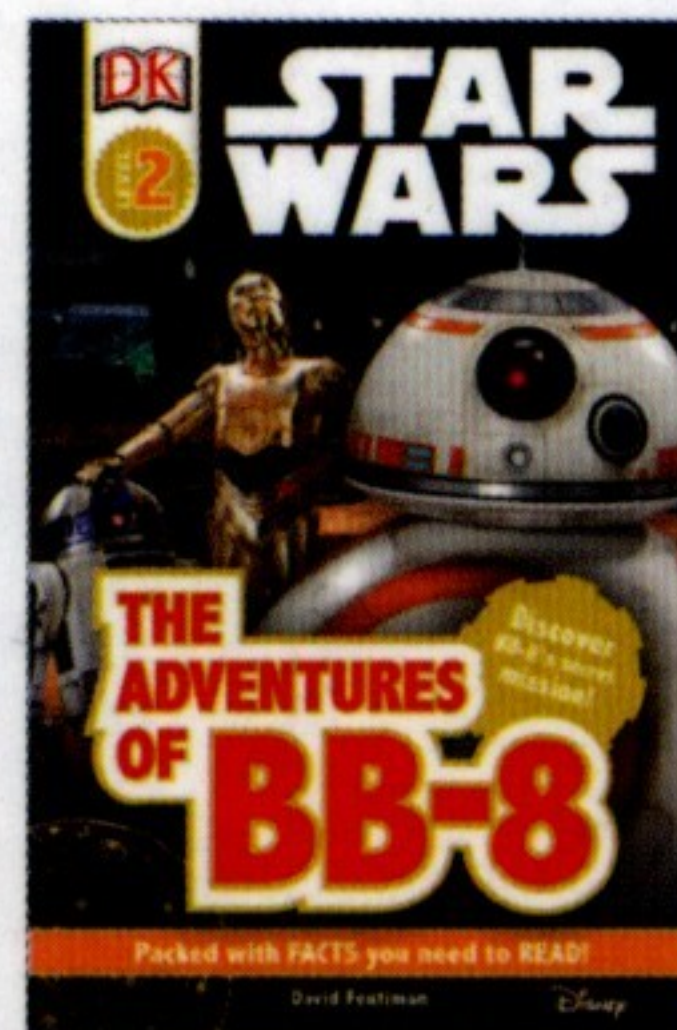
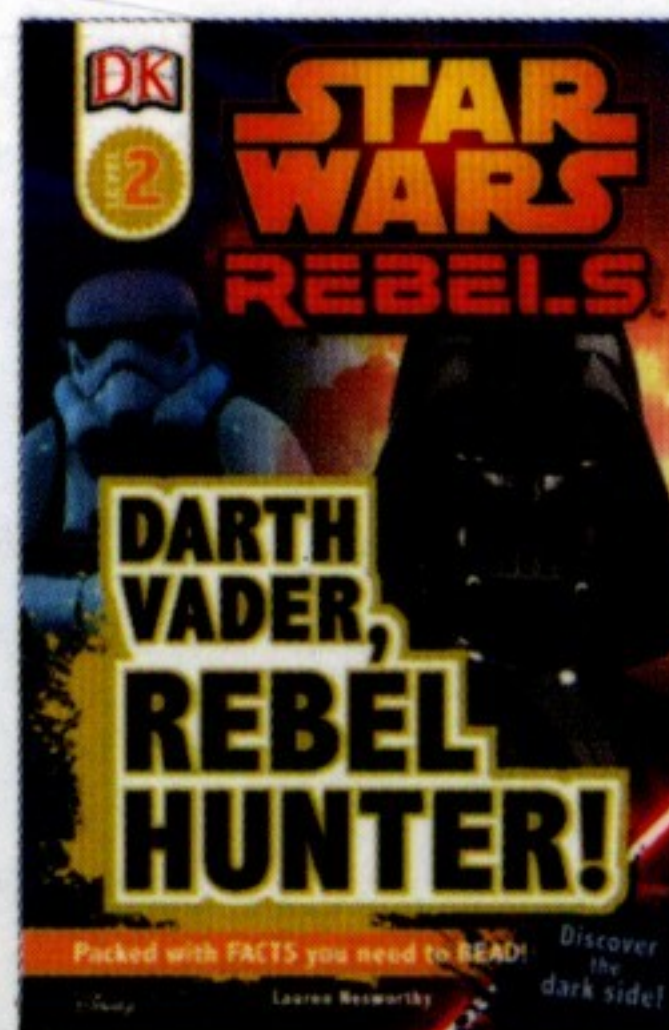


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